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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,665	04/11/2002	Sybille Frank	0475-0204P	4705

2292 7590 03/26/2004

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EXAMINER

FIORILLA, CHRISTOPHER A

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,665

Applicant(s)

FRANK ET AL.

Examiner

Christopher A. Fiorilla

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

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1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means"

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and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because it contains language that may be implied (i.e. "The invention relates to...") and legal phraseology (i.e. "comprising"). Correction is required. See MPEP § 608.01(b).

4. Claim 13 provides for the use of a blank, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 13 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

5. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 1 is indefinite in that the preamble recites the production of “dentures” but the body of the claim makes no mention of dentures.

In claim 1 step a, the phrase “preparation of” should be changed to “preparing” so that is is consistent with the other steps.

In claim 1, step (b), the word “methods” should be deleted.

In claim 3, the phrase “the tool” has no antecedent basis.

In claim 3, the phrase “the processing machine” has no antecedent basis.

In claim 3, the phrases “the rough processing” and “fine processing” have no antecedent basis.

In claim 4, the phrase “the tooth stump” has no antecedent basis. Further, note that claim 1 refers to the production of dentures which are not formed on a tooth stump.

In claims 7-12, the phrase “raw breaking resistance” is indefinite. It is not clear as to what this encompasses.

Claim 13 provides for the use of a blank, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 14 and 15 are improper because they are dependent on more than one claim.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-6 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Panzera et al. (2002/0155412) or Andersson (5,192,472).

Panzera et al. teaches a process for the preparation of ceramic dental restorations such as dentures by preparing a blank comprising a presintered material; processing the blank by milling; dense sintering the blank at e.g. 1600°C. Panzera et al. also discloses that the blank may be made from alumina or zirconia; the perform may be oversized to account for shrinkage; and the blank may be reprocessed after processing (see lower left box of Figure).

Panzera et al. does not disclose that the presintered material has a raw breaking resistance of from 15-28 MPa, nor does it disclose the specific milling parameters.

Panzera et al. does however disclose that the presintered material should be less strong than a fully sintered ceramic (to avoid abrading the milling tools – see paragraph [0008]) but stronger than a green body (so that it can be properly machined—[0011]). Thus Panzera et al. recognizes that the strength of the presintered material is a result effective variable.

Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). Changes in process conditions of an old process within the broad teaching of the prior art does not impart patentability in the absence of an unexpected result. *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955). Thus, it is the examiner's position that optimizing the strength of the presintered bodies and the milling parameters would have been obvious and within the realm of routine experimentation to one skilled in the art at the time of the invention.

Andersson teaches a process for the preparation of ceramic dental by preparing a blank comprising a presintered material; processing the blank by milling; dense sintering the blank at 1100-1600°C. Andersson also discloses that the blank may be made from alumina or zirconia; and the perform may be oversized to account for shrinkage

Andersson does not disclose that the presintered material has a raw breaking resistance of from 15-28 MPa, nor does it disclose the specific milling parameters.

As mentioned above, however, the prior art recognizes that the strength of the presintered material is a result effective variable.

Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). Changes in process conditions of an old process within the broad teaching of the prior art does not impart patentability in the absence of an unexpected result. *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955). Thus, it is the examiner's

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position that optimizing the strength of the presintered bodies and the milling parameters would have been obvious and within the realm of routine experimentation to one skilled in the art at the time of the invention.

9. Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Church et al. (3,789,096) in view of Tsunekawa et al. (4,820,667).

Church et al. teaches an underfired (i.e. presintered) blank. Church et al. discloses that the presintered blank may be made from stabilized zirconia (col. 5, line 12) or zirconia containing additives (col. 7, lines 62-66). Church et al. also discloses that the presintered is soft and can be readily cut with carbide cutting tools, drilled filed, sanded and otherwise formed to practically any desired shape (col. 1, lines 49-53).

Church et al. does not disclose the specifically claimed composition nor does it specifically disclose the strength.

Tsunekawa et al. discloses a zirconia composition containing zirconium oxide, yttrium oxide and aluminum oxide in the amounts claimed (see e.g. No. 10 in Table 1 and No. 67 in Table 6). It would have been obvious to one having ordinary skill in the art at the time of the invention to use this composition to prepare an underfired blank as disclosed in Church et al.

Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Fiorilla whose telephone number is (571) 272-1187. The examiner can normally be reached on M-F, 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Christopher A. Fiorilla
Primary Examiner
Art Unit 1731

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